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# The Labor Market Status of Foreign Born Vietnamese Americans

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*Abstract*: Vietnamese Americans experience significant wage discrimination and occupational discrimination. Vietnamese men and women earn less than comparable non-Hispanic white Americans. Vietnamese men face discrimination in wages on the order of 10%, and this does not seem to vary significantly by region of residence or level of education. Vietnamese women face varying amounts of discrimination depending on their region of residence and their level of education. Vietnamese men and women are less likely to be promoted to managerial and supervisory positions than comparable non-Hispanic white Americans.

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## 1. Introduction

Forty years ago there were only several hundred people of Vietnamese descent living in the United States[1]. With the end of the Vietnam War in 1975, 130,000 Vietnamese refugees made their way to the United States as part of the largest refugee resettlement program in United States history. Tens of thousands continued to escape Vietnam in each of the following years. By 1985 there were well over half a million Vietnamese in the United States, and the Vietnamese arrivals had shifted from being "refugees" to "immigrants".

Today Vietnamese Americans are the third largest Asian American ethnic group. In 2000 Vietnamese Americans represented 11% of all Asian Americans with a population of 1.12 million. Almost 40% of Vietnamese Americans live in California, 12% in Texas, 4% in Washington, and 3.3% in Virginia. The next largest numbers are in Massachusetts, Florida, Georgia, and Louisiana. Vietnamese Americans live disproportionately in the states of California, Washington, Texas, Oregon, Hawaii, Virginia, Massachusetts, and Louisiana.

Most Vietnamese Americans were born abroad. In 1990[2], 79.9% were foreign born, with more than 60% of the foreign born having immigrated in the 1980s. Consequently, 92.5% speak Vietnamese at home. Their families are also significantly larger than the average American family. The average Vietnamese family had 4.4 persons in 1990 versus 3.2 persons for all U.S. families.

Vietnamese Americans were younger and less educated than the average American in 1990. They had a median age of 25.5, younger than the national median of 33 years. Vietnamese Americans were also less likely to have graduated from high school, and less likely to have a

[1] Ronald Takaki states that there were 603 in 1964. Takaki, Ronald, *Strangers From a Different Shore*, Little Brown and Company, 1989, p. 448.
[2] Detailed data on Vietnamese Americans from the 2000 Census are not yet available.

bachelor's degree than the average American. The figures are 61.2% versus 75.2% for high school, and 17.4% versus 20.3% for college for persons 25 years of age and older.

Vietnamese Americans have relatively low family incomes. The median family income in 1990 of $30,550 was lower than the average median family income of $35,225. And since Vietnamese American families are larger than average, they had a per capita income of $9,032 which was much lower than the national average of $14,143. The poverty rate for Vietnamese has been much higher than for all Americans. They had a poverty rate of 25.7%, much higher than the 13.1% national average. They also experienced an unemployment rate of 8.4% when the national average is 6.2%. This is all despite labor force participation rates close to the national average. Since average families are larger, 21.3% of Vietnamese American families had 3 or more workers in the labor force. This is much higher than the national average of 13%.

This study examines the labor market status of foreign-born Vietnamese Americans. We are particularly interested in the issue of labor market discrimination. Though Vietnamese Americans have relatively low family incomes, they are also less educated and have not been in the United States for very long. We examine whether or not Vietnamese Americans have earnings comparable to non-Hispanic white immigrants with similar productivity characteristics. We also examine whether Vietnamese Americans have the same access to managerial positions, or whether they face a glass ceiling climbing the corporate ladder. We test to see if there are differences in the degree of discrimination faced by Vietnamese American men and women with different levels of education, and who live in different parts of the country. Since recent immigrants may face language and cultural barriers in the mainstream economy, we compare foreign-born Vietnamese Americans with foreign-born non-Hispanic white Americans.

## 2. Data

We examine the 1990 Census of Population and Housing Public Use Microdata Samples (PUMS) prepared by the Bureau of the Census. It covers all persons and housing units in the United States. The PUMS contain records representing 5% samples of the housing units in the U.S. and the persons in them. Selected group quarters persons are also included. Our focus is on foreign-born Vietnamese Americans and non-Hispanic white Americans between the ages of 25 and 64 who worked more than 26 weeks during the year, worked more than 35 hours per week, were not self-employed, and earned more than $3,000 in wages and salary income in 1989[3]. We will compare foreign-born Vietnamese American men to foreign-born non-Hispanic white men to measure the extent of racial discrimination faced by Vietnamese men. We will compare foreign-born Vietnamese American women to both foreign-born non-Hispanic American men and women to measure the extent of both racial and gender discrimination faced by Vietnamese women.

## 3. General Characteristics of Foreign Born Vietnamese

We compare the labor market experience of foreign-born Vietnamese men who worked full-time to the labor market experience of foreign-born non-Hispanic white men who worked full-time. The foreign born Vietnamese American men are much more likely to live in California and Texas. They are less likely to have a high school degree, a bachelor's degree or a graduate degree. They are younger, less likely to be married, less likely to live in a rural area, have been in the country for a shorter period of time, and earn less than non-Hispanic white men. See Tables 1 and 2.

Foreign-born Vietnamese men are disproportionately in occupations like machine operators, assemblers and inspectors (assemblers)[4], technical support (electrical and electronic technician; computer programmer), and service (cooks) relative to non-Hispanic white men. They are under-represented in management (managers and administrators), professional specialty occupations (postsecondary teachers), sales (supervisors and proprietors), and transportation (truck drivers). See Table 3.

Looking across industries, foreign-born Vietnamese men are disproportionately in durables manufacturing (computers and related equipment; electrical machinery, equipment and supplies; radio, television and communication equipment; aircraft and parts). Vietnamese men are under-represented in construction, professional services (colleges and universities), and transportation (trucking services). See Table 4.

We then compare the labor market experience of foreign-born Vietnamese women who work full-time with the labor market experience of foreign-born non-Hispanic white women and men who work full-time. Compared to non-Hispanic white women, Vietnamese women are more likely to live in California and Texas. They are less educated on average than white women, and earn less. They are younger, more likely to be married, less likely to live in a rural area, and have been in the country for a shorter period of time. See Tables 1 and 2.

Foreign-born Vietnamese women are disproportionately in occupations like machine operators, assemblers and inspectors (textiles sewing machine operators; assemblers; production inspectors, checkers and examiners), precision production, craft and repair (electrical and electronic equipment assembler), technical support (electrical and electronic technician; computer programmer) and services (hairdresser and cosmetologist) relative to non-Hispanic

[3] The minimum wage in 1989 was $3.35 an hour.
[4] Specific 3-digit categories are in parentheses.

white women. They are under-represented in management (managers and administrators), professional services (registered nurses; elementary school teachers), sales (supervisors and proprietors), and administrative support (secretaries). See Table 3.

Vietnamese women are disproportionately in industries like durables manufacturing (electrical machinery, equipment and supplies; computer and related equipment; medical, dental and optical instruments and supplies), non-durables manufacturing (apparel and accessories), and personal service (beauty shops). They are under-represented in the professional services (hospitals; elementary and secondary schools; colleges and universities), and finance insurance and real estate (banking; insurance; real estate). See Table 4.

When we compare foreign-born Vietnamese women to foreign-born non-Hispanic white men, we find that Vietnamese women are much more likely to live in California and Hawaii. They are younger, less educated, more urban, and have been in the country for a shorter period of time. See Tables 1 and 2.

Foreign-born Vietnamese women are disproportionately in occupations like machine operator, assembler and inspectors (assemblers; production inspectors, checkers and examiners), administrative support (bookkeepers, accounting and auditing clerks; data entry keyers), and services (hairdressers and cosmetologists). They are under-represented in management (managers and administrators), professional occupations (post secondary teachers) and precision production, craft and repair occupations (automobile mechanics; carpenters; machinists). See Table 3.

Vietnamese women are disproportionately in industries like durables manufacturing (electrical machinery, equipment and supplies; computers and related equipment), and non-

durables manufacturing (apparel and accessories, except knit). They are under-represented in construction and transportation (trucking services; air transportation). See Table 4.

**4. Current Labor Market Discrimination**

We proceed to explore the issue of current labor market discrimination and foreign born Vietnamese Americans. Current labor market discrimination exists when workers who have identical productive characteristics are treated differently because of their race or gender. The two prominent forms of current labor market discrimination are wage discrimination and occupational discrimination. Wage discrimination occurs when two equally skilled groups of workers doing exactly the same job under the same working conditions are paid different wages. Occupational discrimination occurs when two equally skilled groups of workers are given different access to certain higher-paying occupations.

Using census data, we can estimate the degree to which Vietnamese Americans suffer from current labor market discrimination as narrowly defined above. We are not attempting to estimate the effect of all the labor market discrimination faced by Vietnamese Americans. More specifically, by taking their productive characteristics as given, we are ignoring the effect of pre-market discrimination and past labor market discrimination. Pre-market discrimination refers different treatment of young Vietnamese Americans before they enter the labor force such as unequal access to quality education. Past labor market discrimination might refer to earlier wage discrimination faced by the parents of these Vietnamese Americans currently in the labor force. Both pre-market discrimination and past labor market discrimination are likely to have affected the nature, quality and amount of education obtained by Vietnamese Americans currently in the

labor force and consequently affect their current earnings. Our dataset does not allow us to measure the differences in earnings due to discrimination from these and other sources.

*Wage Discrimination*

We first explore the issue of wage discrimination. You can see on Table 5 that Vietnamese American men earn less than non-Hispanic white men. They earn about 30% less both annually and by the hour. Vietnamese American men may have lower average earnings than non-Hispanic white American men because of discrimination and/or because of differences in average levels of productive characteristics. Table 5 also shows that Vietnamese women earn less on average than white women, approximately 15% less. Is this because of discrimination or less education or both? Furthermore, Vietnamese women earn 35-49% less than white men. To what extent is this earnings gap due to gender and racial discrimination?

The methodology we use, the Oaxaca decomposition, is the standard tool of economists investigating racial and gender discrimination. We begin by examining data on human capital and other characteristics that are theoretically relevant to the determination of wages. These include age, education, experience, hours of work, region of residence, industry, occupation, years since immigration, language ability, number of children, and marital status for both Vietnamese Americans and non-Hispanic white Americans. We then empirically estimate how each of these characteristics contribute to the earnings of non-Hispanic white Americans. Having measured the levels of the productive characteristics typically possessed by Vietnamese Americans, and having estimated how these characteristics contribute to the earnings of non-Hispanic white Americans, we can estimate how much Vietnamese Americans would be earning if they were treated in the labor market like non-Hispanic white Americans. The difference

between their predicted earnings if white and their actual earnings as Vietnamese is our measure of current labor market discrimination.[5]

More specifically, we estimate regressions that relate the earnings of Vietnamese Americans and white Americans to a wide array of socioeconomic and skill characteristics. In its simplest for, the earnings functions for each of the two groups could be written as a function of a variable X which might represent the years of education. See Jacob Mincer (1974). We would have a Vietnamese earnings equation,

$$w_V = \alpha_V + \beta_V X_V$$

and a non-Hispanic white earnings equation,

$$w_W = \alpha_W + \beta_W X_W$$

One of the properties of least squares regression is that the regression line goes through the mean of all the variables so that

$$\overline{w}_V = \alpha_V + \beta_V \overline{X}_V$$

and

$$\overline{w}_W = \alpha_W + \beta_W \overline{X}_W$$

where the bar above the variable indicates the average value of the variable.

The difference between the average wage of white Americans and the average wage of Vietnamese Americans can be written as:

[5] We are assuming that the wage offer function in a non-discriminatory world would be the same as the non-Hispanic white wage offer function. This seems reasonable because the number of foreign-born non-Hispanic whites in the labor force outnumber the Vietnamese by 15 to 1.

$$\begin{aligned}\Delta\overline{w} = \overline{w}_W - \overline{w}_V &= (\alpha_W + \beta_W \overline{X}_W) - (\alpha_V + \beta_V \overline{X}_V) \\ &= \alpha_W - \alpha_V + \beta_W \overline{X}_W - \beta_V \overline{X}_V \\ &= \alpha_W - \alpha_V + \beta_W \overline{X}_W - \beta_V \overline{X}_V + \beta_W \overline{X}_V - \beta_W \overline{X}_V \\ &= (\alpha_W - \alpha_V) - \beta_V \overline{X}_V + \beta_W \overline{X}_V + \beta_W \overline{X}_W - \beta_W \overline{X}_V \\ &= (\alpha_W - \alpha_V) + (\beta_W - \beta_V)\overline{X}_V + \beta_W (\overline{X}_W - \overline{X}_V)\end{aligned}$$

The last term, $\beta_W (\overline{X}_W - \overline{X}_V)$, represents the portion of the wage differential which is due to differences in skills. The first two terms represent the portion of the wage differential due to discrimination. Lets call this *d*:

$$d = (\alpha_W - \alpha_V) + (\beta_W - \beta_V)\overline{X}_V$$

This measure tells us the difference between how much Vietnamese Americans are actually paid and how much Vietnamese Americans would be paid if they were treated like white Americans. Both of these terms can be positive or negative. The actual wage regressions include multiple variables to capture the effect of all the factors which might affect productivity. See Ronald Oaxaca (1973) for details.

For estimating the wage functions, the sample was restricted to people working full-time (35 hours or more per week) for more than half of 1989. These samples contain about 66% of the men, but only 40% of the women, in the dataset. If the decision to work full-time is not random with respect to the stochastic error in the wage equation, ordinary least squares regression will give us biased estimates of the wage function coefficients. Since this is likely to be a problem with the female wage equations, the James Heckman (1979) selectivity bias correction is used on the female wage equations. A probit equation is estimated to model whether or not an individual is in the sample, and the inverse Mills ratio is included in the wage equation. When we control for selectivity bias, the average wage differential can be decomposed into a portion due to differences in average selectivity bias, a portion due to differences in average skills, and a

portion due to discrimination. The differences in average selectivity bias may also be decomposed further, a part of which may be interpreted as due to discrimination. See Shoshana Neuman and Ronald Oaxaca (1998) for a discussion of various interpretations of the differences in average selectivity bias. Since the appropriate interpretation is unclear, we will not try to interpret the selectivity bias differences in this paper.

One set of estimated earnings regressions appears on Table 6. The dependent variable in these regressions was the log of annual wages and salaries. All the coefficient estimates are of the expected sign, and most are statistically significant at the 5% level. People who work more weeks and longer hours earn more. There are positive returns to education and experience. There are positive returns to being married, and a penalty for being disabled, having language difficulty, and living in a rural area. The longer immigrants are in the country, the better off they are, though most of the gains occur in the early years. Having more children is associated with higher earnings for white men, but lower earnings for Vietnamese and white women. These regressions were run with controls for six regions of residence, 17 industries and 13 occupations. Similar regressions were run with the log of hourly wages as the dependent variable.

Using our wage regression estimates, we can estimate the amount of current labor market wage discrimination faced by Vietnamese Americans. The estimates appear on Table 7. We find that Vietnamese American men 9-12% less than comparable non-Hispanic white men. These differences were significant at the 5% level. It does not matter whether or not you control for industry and occupation. For Vietnamese women, we find that they earn 8-23% less than comparable white women[6], with the magnitude of the gap being sensitive to whether or not we

[6] The female regression estimates are much less precise than the male regression estimates because of the sample selection issue.

include controls for industry and occupation. Vietnamese women are found to earn 30-34% less than comparable white men.

One partial explanation for the earnings gap relative to white men may lie in our measure of labor market experience. We define experience as age minus years of education minus 6. We assume that the people in our sample enter the labor force when they finish their education and stay there. But since women have labor force participation rates around 60%, and men have labor force participation rates around 76%, we may be overestimating the amount of labor force experience women have relative to the men. Alternatively, we could assume that all men are in the labor force 76% of the time, and that all women are in the labor force 60% of the time. Then in an average year, the typical working man would get 21%[7] more labor market experience than the typical working woman. Thus we reduced all the experience measures for the women by 21%, and re-estimated the wage gaps. Doing so reduces all the wage gaps by approximately five percentage points. Thus rather than earning 30-34% less than comparable white men, Vietnamese women earn 25-29% less than comparable white men.

Unfortunately, using this methodology, we are unable to distinguish between racial discrimination and gender discrimination. As an illustration, suppose that after controlling for productivity, white men earn $100, Vietnamese men earn $90, white women earn $85, and Vietnamese women earn $70. One possibility is that there is uniform racial effect of $10, a gender effect for white women of $15, and a gender effect for Vietnamese women of $20. Another possibility is that there is a uniform gender effect of $15, a racial effect for Vietnamese men of $10, and a racial effect for Vietnamese women of $15. A third possibility is that there is a uniform racial effect of $10, a uniform gender effect of $15, and an interaction effect of $5 for being a Vietnamese woman. We are unable to distinguish between these, and an infinite number

of other possible scenarios, with our methodology. See Barbara Reskin and Camille Charles (1999).

Furthermore, the validity of this measure of discrimination depends largely on whether or not we have controlled for all the dimensions in which the skills of the two groups differ. If there exist some skill characteristics that affect earnings but were left out of the regression model, we would have an incorrect measure of current labor market discrimination. The actual amount of current labor market discrimination could be higher or lower.

*Wage Discrimination by Region*

We next examined relative earnings by region of residence. We wanted to find out if Vietnamese Americans faced more discrimination in certain parts of the country than in others. The relative size of the Vietnamese American population varies significantly as you go east from California to New England. One might expect the amount of discrimination they face to be related to the size of the local population of Vietnamese. Thus we estimated separate wage regressions for non-Hispanic white Americans in each of six different regions. We then estimated how much the average Vietnamese in each region should be expected to earn given their average characteristics if they were treated like white Americans. The difference between these predicted earnings and their actual earnings is our measure of wage discrimination.

The results of this analysis are presented on Table 8. For Vietnamese American men, the point estimates are remarkably stable across all six regions. They face discrimination ranging from 8-12% in annual salary, and 6-12% in hourly wages. They do the worst in the South, and the best in the Northeast, though the differences between the regions were statistically insignificant. The results for Vietnamese women are quite different. Vietnamese women

[7] 21% = 1 – (60/76)

experience the most discrimination in the Northeast and the West. But in the South and in Texas, Vietnamese women do at least as well as white women, and experience less overall wage discrimination. Since the Vietnamese American population is most significant in California and Texas, it does not appear that there is any clear relationship between discrimination and population size. There also does not appear to be any relationship between the amount of discrimination faced by Vietnamese American men in a region and the amount of discrimination faced by Vietnamese women in the same region.

*Wage Discrimination by Educational Level*

The effect of labor market discrimination on the earnings of Vietnamese may vary according to the level of education. If Vietnamese are denied advancement into high level positions, educated Vietnamese may suffer more, in terms of earnings not commensurate with their education and experience, than persons with less schooling. On the other hand, if anti-Vietnamese discrimination is present in unions and in blue-collar settings, then the earnings of less educated Vietnamese may be more adversely affected by labor market discrimination than is true for more highly educated Vietnamese. Or Vietnamese Americans might face labor market discrimination across the board.

To explore the possibility of a discrimination effect that varies according to educational level, the earnings of Vietnamese and white Americans were evaluated at different levels of education. We ran wage regressions for non-Hispanic white Americans with less than a high school degree, non-Hispanic white Americans with a high school degree or an associate's degree, and non-Hispanic white Americans with a bachelor's degree or more. We then compared what Vietnamese Americans with different levels of education were actually earnings with what

we would expect them to be earning if they were treated like white Americans with similar levels of education. The results are presented on Table 9.

Vietnamese men see wage discrimination at all levels of education, though they see relatively more in the middle with a high school degree or an associate's degree. Vietnamese women see wage discrimination at all levels of education relative to white men, and also see relatively more discrimination in the middle with a high school degree or an associate's degree. Thus obtaining more education first increases, and then decreases, the amount of discrimination faced by Vietnamese Americans. It is not obvious why moderately educated Vietnamese should face the most wage discrimination.

*Occupational Discrimination – Glass Ceiling*

In addition to being paid less for doing the same work, Vietnamese Americans may be less likely to be promoted on the job. Vietnamese Americans may be denied equal access to the higher rungs of the managerial or corporate ladder. To the extent that such discrimination exists, Vietnamese Americans may be excluded from spheres of power and influence along with the associated money earnings.

We first estimated probit[8] models to explain the factors which affect the probability of someone becoming a manager. We included variables for the level of education, for years of experience, disability status, marital status, rural area, language ability, years since immigration, number of kids, and whether or not the person was Vietnamese. For Vietnamese women and white women, we estimated probit models with sample selection[9]. The probit results are presented on Table 10. All the coefficients were generally of the expected sign and statistically

[8] Logit models were also estimated. The results were almost identical, so only the probit results are presented.
[9] See Van de Ven and Van Pragg (1981).

significant. You are less likely to be a manager if you are less educated, have less experience, are disabled, are not married, or have limited language ability. Having more kids decreases the probability that a woman will be a manager. Being Vietnamese also decreases the probability of being a manager. Being a Vietnamese man decreases the probability of being a manager by 7.64[10] percentage points, reducing the overall probability of being a manager by 76%. Relative to white women, being a Vietnamese woman decreases the probability of being a manager by 5.17 percentage point, reducing the overall probability of being a manager by 57%. Relative to white men, being a Vietnamese woman decreases the probability of being a manager by 7.29 percentage points, reducing the overall probability of being a manager by 75%. Thus Vietnamese men and women are much less likely to be promoted to a managerial position than non-Hispanic white immigrants with similar characteristics.

We also estimated probit models to measure the effect of being Vietnamese on the probability of being a supervisor. See Table 10 for the probit results. You are most likely to be a supervisor if you have a high school degree, and very educated individuals are less likely to be a supervisor. People with less experience, who do not speak English well, and who are not married are less likely to be supervisors. Being a Vietnamese man decreases the probability of being a supervisor by 3.1 percentage points, decreasing the overall probability of being a supervisor by 51% relative to white men. Being a Vietnamese woman reduces the probability of being a supervisor by 1.65 percentage points, reducing the overall probability of being a supervisor by 39% relative to white women. And being a Vietnamese woman reduces the probability of being a supervisor by 4.09 percentage points, reducing the overall probability of being a supervisor by

[10] These percentages are evaluated from the probit coefficient estimates and the mean values of all the variables for Vietnameses using a table for the cumulative normal distribution.

67%, relative to white men. Thus we find that Vietnamese Americans are much less likely to be promoted to supervisor than non-Hispanic whites with similar characteristics.

Unfortunately the census data are flawed in three respects in dealing with the issue of being a manager. One problem is that the category “manager” includes a diverse range of occupational positions from high corporate positions to managers of small retail stores. The census data do not permit distinguishing high-status management positions from other types of management positions. Second, it is possible that individuals are in non-managerial or non-supervisory jobs because they prefer non-managerial or non-supervisory jobs. It is impossible to tell if this is the result of personal choice or discrimination. And third, the census does not distinguish between a person’s job responsibilities and the nature of the work.

## 5. Conclusion

Overall we find that Vietnamese Americans face significant discrimination in the labor market. We find that Vietnamese men face wage discrimination on the order of 10%, and are less likely to be promoted to managerial and supervisory positions than comparable non-Hispanic white men. The region of residence or the level of education does not seem to dramatically affect the degree of wage discrimination faced by Vietnamese men. Vietnamese women also face significant wage discrimination, and are less likely to be promoted to managerial and supervisor positions. However, Vietnamese women experience different degrees of discrimination depending on their region of residence and their level of education. In some regions Vietnamese women earn as much as comparable white women, but in others they earn much less. Thus the amount of discrimination faced by Vietnamese Americans depends on their gender, their region of residence, and level of education.

**Table 1**
**Summary Statistics by Foreign Born Group**

| 1989 | Vietnamese Men | White Men | Vietnamese Women | White Women |
|---|---|---|---|---|
| Income | $26,232 | $38,741 | $19,721 | $22,971 |
| | (16,331) | (30,117) | (12,221) | (15,573) |
| Education | 12.98 | 13.79 | 12.15 | 13.29 |
| | (3.72) | (3.69) | (3.73) | (3.38) |
| High School% | 76.74 | 82.9 | 68.6 | 83.6 |
| Bachelor's Degree% | 26.4 | 37.3 | 18.0 | 27.6 |
| Graduate Degree% | 7.2 | 18.1 | 3.3 | 11.0 |
| Age | 37.1 | 41.7 | 37.3 | 42.4 |
| | (9.13) | (10.76) | (8.44) | (10.77) |
| Experience | 18.1 | 21.9 | 19.2 | 23.1 |
| | (10.0) | (11.9) | (9.8) | (12.0) |
| Married% | 58.2 | 73.0 | 69.7 | 62.7 |
| Manager% | 4.97 | 17.85 | 7.78 | 15.5 |
| Professional% | 15.91 | 18.19 | 9.31 | 17.5 |
| Hours | 43.0 | 45.28 | 41.9 | 41.8 |
| | (7.89) | (9.02) | (7.23) | (7.02) |
| Weeks | 49.9 | 49.9 | 49.5 | 49.1 |
| | (5.06) | (5.18) | (5.55) | (5.98) |
| Rural% | 4.1 | 15.3 | 5.3 | 16.7 |
| Immigration | 10.5 | 23.4 | 11.5 | 25.1 |
| OBS | 4,204 | 63,232 | 2,609 | 43,287 |

Standard deviation is in parentheses.

**Table 2**
**Regional Distribution**
**Percent of Foreign Born Population**

| 1989 | Vietnamese Men | White Men | Vietnamese Women | White Women |
|---|---|---|---|---|
| Northeast | 9.63 | 35.89 | 8.70 | 34.43 |
| Midwest | 7.40 | 16.18 | 6.90 | 15.26 |
| South (except TX) | 17.03 | 17.05 | 20.58 | 19.06 |
| West (except CA) | 8.02 | 7.80 | 9.70 | 8.65 |
| California | 45.96 | 18.75 | 43.23 | 18.07 |
| Texas | 11.96 | 4.33 | 10.89 | 4.53 |

**Table 3**
**Occupational Distribution**
**Percent of Foreign Born Population**

| 1989 | Vietnamese Men | White Men | Vietnamese Women | White Women |
|---|---|---|---|---|
| Management | 4.97 | 17.85 | 7.78 | 15.47 |
| Professional | 15.91 | 18.19 | 9.31 | 17.54 |
| Technical Support | 13.04 | 5.22 | 7.74 | 4.53 |
| Sales | 4.12 | 9.43 | 4.45 | 9.70 |
| Administrative Support | 6.78 | 5.30 | 17.25 | 25.51 |
| Private Service | 0.02 | 0.06 | 0.19 | 0.81 |
| Protective Service | 0.29 | 1.68 | 0.08 | 0.40 |
| Service | 8.81 | 6.10 | 12.11 | 10.57 |
| Farm | 1.24 | 1.03 | 0.23 | 0.27 |
| Precision | 21.69 | 19.99 | 14.83 | 3.94 |
| Machine Operator | 19.05 | 6.81 | 23.19 | 9.28 |
| Transportation | 4.61 | 7.84 | 2.84 | 1.90 |
| Military | 0.10 | 0.50 | 0.00 | 0.06 |

**Table 4**
**Industry Distribution**
**Percent of Foreign Born Population**

| 1989 | Vietnamese Men | White Men | Vietnamese Women | White Women |
|---|---|---|---|---|
| Agriculture | 1.19 | 1.04 | 0.42 | 0.58 |
| Mining | 0.33 | 0.69 | 0.27 | 0.22 |
| Construction | 2.93 | 10.01 | 0.77 | 1.42 |
| Non-durables Man | 8.87 | 7.78 | 11.84 | 9.20 |
| Durables Man | 42.39 | 19.05 | 33.73 | 10.41 |
| Transport | 3.43 | 5.17 | 1.84 | 2.86 |
| Communication | 1.02 | 1.44 | 0.80 | 1.34 |
| Utilities | 1.14 | 1.53 | 0.50 | 0.51 |
| Wholesale | 4.33 | 5.29 | 3.64 | 3.41 |
| Retail | 10.92 | 12.24 | 11.31 | 13.95 |
| Finance, Insurance, Real Estate | 3.00 | 5.93 | 6.75 | 11.23 |
| Business Services | 5.11 | 4.90 | 2.80 | 3.83 |
| Personal Services | 2.16 | 2.05 | 6.29 | 4.23 |
| Entertainment | 0.57 | 1.20 | 0.65 | 1.12 |
| Professional | 9.25 | 15.61 | 14.14 | 31.26 |
| Public Administration | 3.00 | 4.29 | 4.22 | 4.17 |
| Military | 0.36 | 1.77 | 0.04 | 0.28 |

**Table 5**
**Annual and Hourly Wage and Salary of Foreign Born**

| 1989 | Vietnamese Men | White Men | Vietnamese Women | White Women |
|---|---|---|---|---|
| Annual Wage & Salary | $26,232 | $38,741 | $19,721 | $22,971 |
| Relative to White Men | 0.68 | 1.00 | 0.51 | 0.59 |
| Relative to White Women | 1.14 | 1.69 | 0.86 | 1.00 |
| | | | | |
| Hourly Wage | $12.31 | $17.20 | $9.59 | $11.22 |
| Relative to White Men | 0.72 | 1.0 | 0.56 | 0.65 |
| Relative to White Women | 1.10 | 1.53 | 0.85 | 1.00 |

**Table 6**
**Determinants of Annual Wage and Salary**

| 1989 | Vietnamese Men | White Men | Vietnamese Women | White Women |
|---|---|---|---|---|
| Constant | 7.916* | 8.1085* | 7.763* | 8.089* |
| | (0.130) | (0.040) | (0.187) | (0.046) |
| Weeks | 0.026* | 0.026* | 0.027* | 0.026* |
| | (0.001) | (0.0004) | (0.001) | (0.0004) |
| Hours | 0.008* | 0.008* | 0.006 | 0.008* |
| | (0.001) | (0.0002) | (0.001) | (0.0003) |
| Education | -0.034* | -0.034* | -0.044* | -0.036* |
| | (0.006) | (0.002) | (0.008) | (0.003) |
| Education2 | 0.003* | 0.003* | 0.003* | 0.003* |
| | (0.0003) | (0.0001) | (0.0004) | (0.0001) |
| Experience | 0.014* | 0.032* | 0.012 | 0.015* |
| | (0.003) | (0.0007) | (0.003) | (0.0008) |
| Experience2 | -0.0003* | -0.0004* | -0.0003 | -0.0002* |
| | (0.00005) | (0.00001) | (0.0001) | (0.00002) |
| Immigration | 0.041* | 0.005* | 0.032* | 0.007* |
| | (0.004) | (0.0005) | (0.005) | (0.0007) |
| Immigration2 | -0.0008* | -0.00006* | -0.0007* | -0.0001* |
| | (0.0002) | (0.00001) | (0.0002) | (0.00001) |
| Disability | -0.024 | -0.146* | 0.083 | -0.090* |
| | (0.049) | (0.012) | (0.056) | (0.017) |
| Marital | 0.122* | 0.154* | 0.074* | 0.011 |
| | (0.015) | (0.005) | (0.019) | (0.006) |
| Rural | -0.015 | -0.083* | -0.117* | -0.130* |
| | (0.033) | (0.006) | (0.036) | (0.006) |
| Language | -0.071* | -0.167* | -0.098* | -0.063* |
| | (0.018) | (0.010) | (0.023) | (0.011) |
| Kids | -0.010 | 0.011* | -0.011* | -0.028* |
| | (0.005) | (0.002) | (0.005) | (0.002) |
| Mills | | | 0.201 | -0.036 |
| | | | (0.048) | (0.019) |
| $\overline{R}^2$ | 0.43 | 0.40 | | |
| NOB | 4,204 | 63,232 | 2,609 | 43,287 |
| | | | (3,970) | (74,143) |

Standard errors are in parentheses.
* indicates significance at the 5% level.
There were also controls occupation, industry, class of worker and region of residence.
Kids refers to the number of children at home for men, and the total number of births for women. Mills is the inverse Mills ratio. NOB is the number of censored observations. Total observations appear in parentheses.

**Table 7**
**Expected Earnings of Vietnamese Americans**

| 1989 | Vietnamese Men/ White Men | | Vietnamese Women/ White Women | | Vietnamese Women/ White Men | |
|---|---|---|---|---|---|---|
| | **A** | **B** | **A** | **B** | **A** | **B** |
| Actual Annual Wage | $22,619 | $22,619 | $16,618 | $15,578 | $16,618 | $15,578 |
| Predicted Annual Wage | $25,799 | $25,429 | $21,327 | $17,449 | $24,736 | $23,607 |
| Relative Wage | 0.88* | 0.89* | 0.78* | 0.89* | 0.67* | 0.66* |
| Actual Hourly Wage | $10.73 | $10.73 | $8.12 | $7.85 | $8.12 | $7.85 |
| Predicted Hourly Wage | $11.84 | $11.76 | $10.57 | $8.53 | $11.62 | $11.20 |
| Relative Wage | 0.91* | 0.91* | 0.77* | 0.92* | 0.70* | 0.70* |

A: without industry and occupation controls
B: with industry and occupation controls
* indicates statistical significance at the 5% level
region controls were included in the regressions
the dollar figures are anti-logs of the predicted values

**Table 8**
**Expected Earnings by Region of Residence**

| | | Northeast | South | Midwest | West | California | Texas |
|---|---|---|---|---|---|---|---|
| Vietnamese Men / White Men | Annual Wage | 0.92* | 0.86* | 0.87* | 0.88* | 0.89* | 0.88* |
| | Hourly Wage | 0.94* | 0.88* | 0.90* | 0.90* | 0.90* | 0.92* |
| | NOB | 405 | 311 | 716 | 337 | 1932 | 503 |
| Vietnamese Women / White Women | Annual Wage | 0.75* | 1.11 | 0.86* | 0.80* | 0.87* | 1.17 |
| | Hourly Wage | 0.82* | 1.16* | 0.88 | 0.84* | 0.91 | 1.07 |
| | NOB | 227 (350) | 180 (296) | 537 (747) | 253 (379) | 1128 (1767) | 284 (431) |
| Vietnamese Women / White Men | Annual Wage | 0.62* | 0.84* | 0.70* | 0.65* | 0.77* | 0.86 |
| | Hourly Wage | 0.66* | 0.90 | 0.74* | 0.71* | 0.82* | 0.90 |
| | NOB | 227 (350) | 180 (296) | 537 (747) | 253 (379) | 1128 (1767) | 284 (431) |

* indicates statistical significance at the 5% level
Industry and occupation were included.
NOB is the number of censored observations. The total number of observations appears in parentheses.

**Table 9**
**Expected Earnings by Educational Attainment**

| | | <HS | HS+ | BA+ |
|---|---|---|---|---|
| Vietnamese Men / White Men | Annual Wage | 0.93* | 0.86* | 0.93* |
| | Hourly Wage | 0.95* | 0.88* | 0.95* |
| | NOB | 978 | 2116 | 1110 |
| Vietnamese Women / White Women | Annual Wage | 1.11 | 0.79* | 0.91 |
| | Hourly Wage | 0.96 | 0.81* | 0.98 |
| | NOB | 820 | 1319 | 470 |
| | | (1380) | (1915) | (636) |
| Vietnamese Women / White Men | Annual Wage | 0.70* | 0.65* | 0.79* |
| | Hourly Wage | 0.73* | 0.69* | 0.86* |
| | NOB | 820 | 1319 | 470 |
| | | (1380) | (1915) | (636) |

* indicates statistical significance at the 5% level.
<HS: individuals without a high school diploma
HS+: individuals with a high school diploma or an associate's degree
BA+: individuals with a bachelor's degree or graduate degree
Industry, occupation and region controls were included in the regressions

**Table 10**
**Probability of Being a Manager/Supervisor**

| **1989** | ***Vietnamese Men/ White Men*** | | ***Vietnamese Women/ White Women*** | | ***Vietnamese Women/ White Men*** | |
|---|---|---|---|---|---|---|
| **Probit** | **Manager** | **Super** | **Manager** | **Super** | **Manager** | **Super** |
| Constant | -2.388* | -1.278* | -1.757* | -1.676* | -2.378* | -1.261* |
| | (0.085) | (0.069) | (0.154) | (0.159) | (0.085) | (0.070) |
| Vietnamese | -0.709* | -0.337* | -0.433* | -0.262* | -0.672* | -0.518* |
| | (0.041) | (0.040) | (0.051) | (0.059) | (0.051) | (0.055) |
| High School | 0.359* | 0.146* | 0.388* | 0.122* | 0.370* | 0.145* |
| | (0.025) | (0.022) | (0.033) | (0.034) | (0.025) | (0.023) |
| Associate | 0.579* | 0.127* | 0.451* | 0.060 | 0.588* | 0.126* |
| | (0.031) | (0.032) | (0.040) | (0.047) | (0.031) | (0.032) |
| BA | 0.857* | 0.0001 | 0.565* | 0.107* | 0.877* | -0.005 |
| | (0.027) | (0.028) | (0.039) | (0.044) | (0.027) | (0.028) |
| MA | 1.013* | -0.066 | 0.601* | -0.043 | 1.021* | -0.067 |
| | (0.029) | (0.035) | (0.045) | (0.061) | (0.029) | (0.035) |
| Professional | 0.551* | -0.144* | 0.156* | -0.277* | 0.561* | -0.155* |
| | (0.046) | (0.065) | (0.077) | (0.134) | (0.046) | (0.065) |
| PhD | 0.800* | -0.361* | 0.565* | -0.240 | 0.805* | -0.374* |
| | (0.038) | (0.066) | (0.074) | (0.155) | (0.038) | (0.067) |
| Exp | 0.044* | 0.015* | 0.020* | 0.007 | 0.044* | 0.015* |
| | (0.003) | (0.003) | (0.003) | (0.004) | (0.003) | (0.003) |
| Exp2 | -0.0007* | -0.0003* | -0.0004* | -0.0002* | -0.0007* | -0.0003* |
| | (0.00005) | (0.00005) | (0.00007) | (0.00009) | (0.00005) | (0.00006) |
| Disability | -0.226* | -0.004 | 0.109 | -0.049 | -0.226* | -0.013 |
| | (0.044) | (0.043) | (0.070) | (0.089) | (0.044) | (0.044) |
| Marital | 0.180* | 0.161* | 0.056* | 0.063* | 0.179* | 0.157* |
| | (0.017) | (0.019) | (0.025) | (0.032) | (0.017) | (0.020) |
| Rural | -0.010 | 0.013 | -0.0009 | -0.039 | -0.010 | 0.007 |
| | (0.018) | (0.021) | (0.024) | (0.031) | (0.018) | (0.021) |
| Language | -0.551* | -0.290* | -0.362* | -0.364* | -0.572* | -0.286* |
| | (0.043) | (0.037) | (0.056) | (0.062) | (0.044) | (0.038) |
| Kids | 0.002 | 0.019* | -0.035* | 0.004 | 0.002 | 0.021* |
| | (0.006) | (0.007) | (0.008) | (0.009) | (0.007) | (0.007) |
| Immigration | -0.010* | 0.011* | 0.001 | 0.011* | -0.009* | 0.011* |
| | (0.002) | (0.002) | (0.020) | (0.004) | (0.002) | (0.002) |
| Immigration2 | 0.0001* | -0.0001* | -0.002 | -0.0002* | 0.0002* | -0.0001* |
| | (0.00003) | (0.00004) | (0.002) | (0.0001) | (0.00003) | (0.00004) |
| Pseudo $R^2$ | 0.088 | 0.094 | | | 0.085 | 0.094 |
| NOB | 67,436 | 67,436 | 45,896 | 45,896 | 65,841 | 65,841 |
| | | | (78,113) | (78,113) | | |

Standard errors are in parentheses
* indicates statistical significance at the 5% level.
manager: 3-digit occupations codes 003-037
supervisor: 3-digit occupation codes 243, 303-307, 413-415, 433, 448, 456, 475, 476, 477, 485, 494, 497, 503, 553-558, 613, 628, 803, and 843
Industry and regional controls were included, but are not reported.
Education variables are dummy variables representing the individual's highest educational degree.
Kids refers to the number of children at home in the male regressions and the total number of children born in the female regressions.

## References

Heckman, James, "Sample selection bias as a Specification Error," *Econometrica* 47 (1979), 153-61.

Mincer, Jacob, *Schooling, Experience, and Earnings* (Cambridge: NBER, 1974).

Neuman, Shoshana and Oaxaca, Ronald, "Estimating Labour Market Discrimination with Selectivity Corrected Wage Equations: Methodological Considerations and an Illustration from Israel," Centre for Economic Policy Research, Discussion Paper #1915, June 1998.

Oaxaca, Ronald, "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review* 14 (1973), 693-709.

Oaxaca, Ronald, and Ransom, Michael, "On Discrimination and the Decomposition of the Wage Differential," *Journal of Econometrics* 61(1994), 5-21.

Reimers, Cordelia, "Labor Market Discrimination Against Hispanic and Black Men," *The Review of Economics and Statistics* 65 (1983), 570-79.

Reskin, Barbara and Camille Charles, "Now You See 'Em, Now You Don't: Race, Ethnicity, and Gender in Labor Market Research," Irene Browne, ed., *Race Gender and Economic Inequality: African Americans and Latina Women in the Labor Market* (Russell Sage Foundation, 1999).

Takaki, Ronald, *Strangers From a Different Shore* (Brown, Little and Company, 1989).

Van de Ven, Wynand, and Bernard Van Pragg, "The Demand for Deductibles in Private Health Insurance: A Probit Model with Sample Selection," *Journal of Econometrics* 17(1981), 229-252.

*We, the American Asians*, U.S. Department of Commerce, Bureau of the Census, September 1993.